

SDD 10A09 Electrical Details Structure Mount Light Poles Grounded Neutral Systems

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING, SDD10A01.

USE TIME DELAY FUSE PER LUMINAIRE MANUFACTURER RECOMMENDATION.



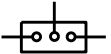
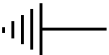




WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

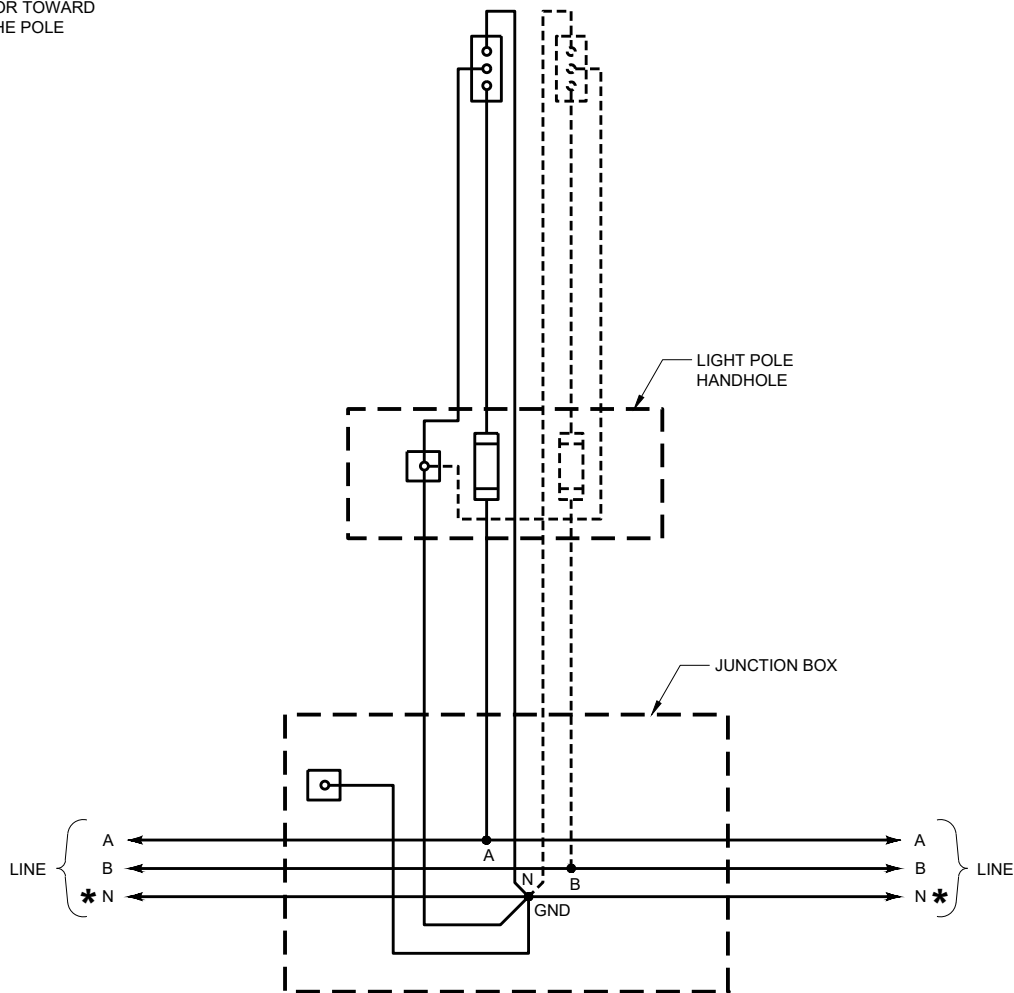
THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

WIRE SIZE FROM THE JUNCTION BOX TO THE POLE HANDHOLE SHALL EQUAL THE SIZE OF THE POLE WIRE.

THE INTENT OF JUNCTION BOX SPLICES AS SHOWN IN THIS DETAIL IS FOR LIGHTING SYSTEMS WITH HEAVY LINE WIRE TOO LARGE TO PULL THROUGH THE CONDUIT INTO THE POLE HANDHOLE, DUE TO CONDUIT FILL REQUIREMENTS OF N.E.C. AND / OR THE STIFFNESS OF THE WIRE COMPARED TO THE NUMBER OF BENDS IN THE CONDUIT. IN CASES WHERE LINE WIRE IS LIGHTER, SUCH AS SMALL ER SYSTEMS OR TOWARD THE FURTHEST END OF A LARGER SYSTEM PULL THE LINE WIRE INTO THE POLE HANDHOLE FOR SPLICING.

LEGEND

A,B,X,Y,Z	UNGROUND CIRCUI CONDUCTORS
N	GROUND CIRCUI CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
ϕ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD



* INCREASE NEUTRAL BY ONE SIZE
FOR LENGTH OF STRUCTURE

TYPICAL WIRING DIAGRAM

GROUND NEUTRAL SYSTEM

1 - ϕ 240 / 480VAC 3 WIRE OR 480VAC 2 WIRE

ELECTRICAL DETAILS STRUCTURE MOUNT LIGHT POLES GROUND NEUTRAL SYSTEMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGINEER

FHWA

*Electrical Details Structure Mount Light Poles Grounded Neutral Systems***References:**

[FDM15-5 Attachment 30.5](#) and [30.6](#) for conventional symbols.
[Standard Spec. 655](#) Electrical Wiring

Bid items associated with this drawing:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
655.0600 - 0699	Electrical Wire Lighting (AWG)	EACH

Standardized Special Provisions associated with this drawing:

<u>STSP NUMBER</u>	<u>TITLE</u>
NONE	

Other SDDs associated with this drawing:

[SDD 10A1](#) Electrical Handhole Wiring

Design Notes:

This SDD is generally used for municipal work or for the maintenance of existing State systems built with the grounded neutral wiring method. The State no longer uses this wiring method for new systems. Use this SDD in conjunction with the SDD for Electrical Handhole Wiring.

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